Reviewer’s report

Title: Productive activities, mental health and quality of life in disability: Exploring the role enhancement and the role strain hypotheses

Version: 0 Date: 31 May 2018

Reviewer: Maria Kleinstäuber

Reviewer’s report:

The current manuscript addresses an interesting and innovative idea. Authors try to transfer assumptions of a role strain versus a role enhancement model on a population of physically disabled individuals. The current peer-review covers only the Introduction and Methods because the manuscript is part of the results free review program. Another strength of the study is the big and representative sample. Well validated measures were used. However I am not totally convinced if the authors thoroughly thought through their research questions. My major comments refer to the authors' research questions and hypotheses and related statistical analyses (see below)

Major comments

Introduction

#01: p. 4/l. 107: Could you be more specific about your second research question? What do you exactly expect? What is your hypothesis?

#02: p. 4/l. 107: Could you be more specific about your second research question? What do you exactly expect. What is your hypothesis?

Methods

#03: p. 6/l. 140: The discussion and limitations of the outcome "engagement in paid work" should be discussed later (in the Discussion section). It is possible that participants indicate to be engaged in paid work although they are probably on sick leave.

#04: p.7/l. 170: You should later discuss in your manuscript that probably important confounders are missing, e.g. way of coping or acceptance, personality characteristics which influence the way of dealing with the disability, social support...).

#05: p. 7 /l. 172: You include "completeness of lesion" as confounder. Would it be much more important to include the variable "coping with lesion" as confounder, wouldn't? I expect that level of completeness of lesion and how well people deal with the lesion are not necessarily
strongly correlated strongly. However I expect that the way how individuals deal with their lesion is much more important as confounding variable.

#06: p. 7/177: Authors state that acute health conditions were not included as confounders. It is important to add this to the limitations in the discussion later.

#07: p. 8/l. 190: The statistical analyses should be checked by an expert. I'm not sure if it is appropriate to account for missing values in potential confounders with multiple imputation.

#08: p. 8/l. 201: I do not understand what you exactly expect as result from the regression. I assume you want to find out if there is either a positive or a negative association between predictors and outcomes (after controlling for confounders)? Do you want to find out if either the role strain or the role enhancement model fits well in your sample? Would you consider a positive association to allude to a role enhancement model and would you consider a negative association as hint for a role strain model? Could it be also possible that you have two subgroups? One subgroup in which the role enhancement model can be confirmed and one subgroup in which the role strain model is applicable (probably dependent on how individuals deal with their disability)?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Unable to assess

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
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